Amendments to the Claims:

Please amend claims 10, 26 and 31 and cancel claims 23 and 32 as shown in the following listing of claims. This listing of claims will replace all prior versions and listings of claims in the application:

1-9. (cancelled)

10. (currently amended) An apparatus for receiving data from a fiber channel, the apparatus comprising:

an input that receives a wideband signal;

a plurality of mixers that accept the wideband signal and mix it with a mixer frequency;

a plurality of low-pass filters that filter the outputs of the mixers;

a plurality of programmable demodulators each accepting the output of one of the mixers and demodulating said mixer output, thereby providing a demodulated digital output; ~~and~~

a combiner circuit for combining the demodulated digital outputs from the plurality of programmable demodulators into at least one digital data stream; and

at least one demodulator providing soft decisions as an output;

at least one trellis decoder that accepts soft decisions from the at least one demodulator and provides a trellis decoding of the soft outputs and provides a hard decision to the combiner input.

11. (original) An apparatus as in claim 10 wherein the mixer frequency is a programmable frequency.

12. (previously presented) An apparatus as in claim 10 wherein the plurality of low-pass filters have programmable bandwidth.

13. (original) An apparatus as in claim 10 wherein the programmable demodulators further comprise a control input that controls the type of demodulation applied to the signal accepted from the mixer.

14. (original) An apparatus as in claim 13 wherein the type of modulation selected consists essentially of BPSK, QPSK, and QAM.

15. (original) An apparatus as in claim 10 wherein the combiner circuit comprises a XGMII.

16-25. (cancelled)

26. (currently amended) A method of processing data received from a fiber channel, the method comprising:

      receiving a wideband signal;

      mixing the wideband signal with a mixer frequency to produce a plurality of mixed signals;

      filtering the plurality of mixed signals with a plurality of low-pass filters to produce a plurality of baseband signals;

      demodulating the plurality of baseband signals with a plurality of programmable demodulators, thereby providing a plurality of demodulated digital outputs, wherein demodulating the plurality of baseband signals comprises providing soft decisions as an output;

      providing a trellis decoding of the soft outputs and providing hard decisions; and

      combining the ~~demodulated digital outputs~~ hard decisions into at least one digital data stream.

27. (previously presented) The method of claim 26 wherein the mixer frequency is a programmable frequency.

28. (previously presented) The method of claim 26 wherein the plurality of low-pass filters have programmable bandwidth.

29. (previously presented) The method of claim 26 wherein the programmable demodulators comprise a control input that controls the type of demodulation applied to the baseband signals.

30. (previously presented) The method of claim 29 wherein the type of modulation selected

consists essentially of BPSK, QPSK and QAM.

31. (currently amended) The method of claim 26 wherein combining the ~~demodulated digital outputs~~ hard decisions into at least one digital data stream comprises combining the ~~demodulated digital outputs~~ hard decisions into at least one digital data stream using a XGMII.

32. (cancelled)

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